



Science on the building site

Mass-market housing is on the way to being emissions neutral, writes **Cheryl Jones**.

It looks like any other Australian bungalow, but one dwelling being built near Melbourne could set the standard for suburban homes of the future.

The demonstration "zero emissions house" is being designed and constructed by the Henley Properties Group in collaboration with the CSIRO and developer Delfin Lend Lease.

It is solar powered with local energy storage. Any excess energy would be fed into the grid, with the house drawing electricity if it needed to. It has the latest energy efficiency measures, including good insulation and efficient appliances. CSIRO is working on a system to switch non-essential appliances off when they are not being used. And the house will be fitted with a real-time energy monitoring system to encourage householders to curb their energy use.

The energy efficiency designs alone cut greenhouse gas emissions by 50 per cent on the

figure for the typical five-star houses going up in suburbs around Australia today, says project leader Greg Follente of the CSIRO Energy Transformed flagship. "Renewable on-site energy brings the actual net emissions to zero," he says.

The pressure for zero emissions dwellings will be on as Australia pursues its greenhouse gas emissions targets. With residential energy use accounting for more than 10 per cent of total emissions in Australia, the housing sector is critical to meeting national targets.

The demonstration house (above) being built at Laurimar, 30 kilometres from Melbourne, is designed for the mass market. CSIRO studies show the potential for energy savings of 60 to 80 per cent and carbon emissions reductions of between 50 and 100 per cent, for new houses across Australia's climate zones.

☐ Cheryl Jones is a science journalist who writes for the CSIRO.